
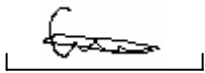
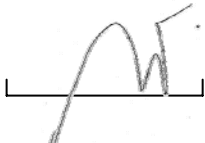


# GENERAL INSTRUCTIONS FOR IMPLEMENTING ADAS PRODUCTS

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# GENERAL INSTRUCTIONS FOR IMPLEMENTING ADAS PRODUCTS

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## Chapter A

## Introduction

The purpose of this document is to draw the user's attention to the important points relating to safety and correct implementation of **ADAS** equipment.

This document and the " product manual " should be read thoroughly before the product is put into use.

## Chapter B

## The user

The user must be a qualified person having good knowledge of electricity and electronics to be able to satisfactorily perform :

- installation
- use
- maintenance

This person must be fully aware of the set of safety rules governing labour legislation.

## Chapter C

## Products

**ADAS** products are manufactured with the utmost care in compliance with strict quality regulations.

They have undergone numerous conformity tests before being delivered to you. Before using them, make a last check:

- that you have read all the technical specifications on the product data sheet;
- that the version you have ordered is the one which is really best suited to your project.

if there is a doubt as far as your application is concerned, do not hesitate to get in touch with our technical backup team

**Tel.** : (33) 1 30 58 90 09

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The warranty takes effect as from the time the product is delivered.

The warranty comes into force in the event of a failure occurring within the scope of normal use of the product.

It cannot be applicable in the following cases :

- if the product is used outside its scope of application stipulated in the product data sheet ;
- if the product is incorrectly installed or if the product is incorporated in equipment which is itself faulty ;
- if the user does not observe the environment rules for the product :
  - transfer in incorrect and unsuitable packaging
  - unsuitable storage conditions
  - insertion in a live equipment assembly
  - exceeding the physical environment or particular pollution limits
- If the user modifies or makes alterations to the product ;
- If the labelling and serial numbers are removed or modified.

The warranty amount is limited to the value of the product only and **ADAS** shall in no case take account of the direct or indirect consequences of a failure or malfunctioning of its products.



**ADAS** products are manufactured with a relentless concern for quality and safety.

However, the use of any equipment item requires the user to respect certain minimum safety rules.

## E.1. Dangers resulting from the racks

As a general rule, the user should take all the following precautions concerning this type of product:

### >>>WEIGHT

The racks are often heavy, and a safe place therefore has to be provided to unpack them and place them stably. The help of another person is often recommended.

### >>>SHAPE

The rackable versions in particular may present sharp cutting parts. Take all precautions to avoid cutting yourself (gloves, protective apron, etc ...).

### >>>ELECTRICITY

Mains supplied equipment presents a source of danger (110V or 220V)

Disconnect the equipment for any action to be performed inside it (inserting a card, opening the doors with power supply, configuration installation, etc ...)

Be careful of power retentions (VHV, charged capacitor, etc ...)

### >>>HEAT



After a period of operation, the equipment may be hot, so be careful of risks of burns.

### >>>OTHER DANGERS

The user should as a general rule take care of his personal protection, of that of the people around him and of the environment.

## E.2. Dangers resulting from boards

The main sources of danger inherent in the cards are :

### >>>PHYSICAL SOURCES

The user should be careful of the risks of:

- cutting with the edges of the cards or the FRONT faces
- pricking himself on the soldering spikes, configuration straps, connector pins, etc ...
- allergies to the materials used : tin, lead, copper, cleaning solvent residues , etc ...

### >>>ELECTRICAL SOURCES

When the cards are powered on, real dangers exist such as :

- high voltage on certain models
- electrostatic discharges even after the power has been switched off
- high frequency emission

In addition, rings, chains, etc ... can result in serious consequences.

### >>>HEAT SOURCES

Power components can burn the user even 30 min. after the power has been switched off.

- DC/DC converter
- transistors and integrated circuits
- regulators
- passive resistive elements

## F.1. Static electricity



Electronic products are generally very sensitive to static electricity.

If the user is charged with static electricity, he may damage the components.

Electrostatic discharges may be as high as 5 to 30KV, and care must therefore be taken over the following points :

- Clothes worn  
Right : leather shoes, cotton clothes, ...  
Wrong : crepe soles, triboelectric fibres, ...
- Floor covering  
Right : Tiling  
Wrong : Synthetic carpeting
- Working surface  
Right : Tiling  
Wrong : Synthetic carpeting

It is strongly recommended to wear a wrist-strap (earthed conductor) when installing the products. If this is not possible, touch the metallic part of a radiator or an earthed conducting element frequently.

The precautions must be taken as soon as the product is removed from its antistatic packaging.

The equipment should be handled as little as possible and held like photographs (by the corners only).

## F.2. Corrosion / pollution

Make sure that the environment conditions are compatible with the protection class of the products. Take all precautions in other cases :



- acid environment
- abrasive dust particles
- oils / greases
- salt-laden air, etc ...

Also, do not touch the connector pins and solderings with your fingers.

### F.3. Temperature

Make sure that the conditions of use of the products correspond to their climatic range.

**Example** : Storage temperature : - 10°C à + 70°C  
Operating temperature : 0°C à + 60°C  
Mean ambient temperature : 35°C

### F.4. Humidity

The relative humidity must be checked according to the standard EN 60204-1 for example.

Relative humidity : 30 to 90 % without condensation

### F.5. Altitude

As a general rule, the equipment is designed for - 20 to + 2000m with respect to sea level.

### F.6. Vibrations and chocks

If the equipment is to operate in this type of disturbances, take all measures to minimise stresses.

- choice of the least disturbed location
- addition of blocking wedges
- equipment on dampers

### F.7. Ionizing environments

If the equipment is installed in this type of environment (micro-waves, UV, X-rays, or  $\gamma$  rays, etc ...) take the precautions applicable to this type of environment.

(e.g. : lead for  $\gamma$ ).

## F.8. Electromagnetic compatibility

PHENOMENON	STANDARD
ESD	p <sub>γ</sub> EN 50082-2
FIELDS	p <sub>γ</sub> EN 50082-2
BURST	p <sub>γ</sub> EN 50082-2
CRI	p <sub>γ</sub> EN 50082-2
	p <sub>γ</sub> EN 50082-2

### IMPORTANT REMARK CONCERNING EMC

As a result of the European directive **89/336/CEE**, the equipment sold must bear the label **CE**.

We would remind you that, within the context of products built up using constituent components put together by an integrator, it is up to the integrator to take the necessary steps for the product thus achieved to comply with the regulations in force.

The equipment items sold by **ADAS** are only constituent components. Our company cannot be held liable or responsible for use of its products in an application where the integrator has not carried out the compliance tests of the final equipment.

**ADAS** has nevertheless taken into account, in a strict manner, these EMC issues when designing their products. Obtaining a certificate will therefore be easier when using their products.



## F.9. Other precautions

Get in touch with our engineers to analyze the possible effects of particular constraints according to your scope of application.

This chapter deals with very rare extreme cases.

If when commissioning the equipment, one of these mishaps should occur, proceed as follows:

## >>>FIRE



Insulate yourself electrically with a rag or other non-conducting product

Switch the equipment off immediately and disconnect the power source(s)

Do not douse with water but use only a fire extinguisher designed for this type of fire

## >>>GAS EMANATION

Switch the equipment off

Air the premises immediately

Avoid inhaling the product

## >>>EXPLOSION



Never be too close to an equipment during its powering

Be careful of your eyes and wear safety glasses if possible

## H.1. Visual checks

You have just received your **ADAS** equipment which, we hope, will give you complete satisfaction.

This equipment was manufactured with the greatest care and all precautions have been normally taken for it to reach you in perfect operating condition.

Do however check the following points :

### >>>PACKAGING

The packaging must be in good condition and if this is not the case, make a contingency claim with the transporter.

Make a list of any damage there may be.

If the packaging is OK, continue the procedure.

### >>>PRODUCT

Check its reference against your order

Check the serial number with the delivery form

Check visually that the product is in perfect condition

Check that the documentation corresponds to the product and version

If any one of these points is not respected, contact us.

## H.2. Implementation

The user must read the product instruction document right through before making use of the product ;

- Take all the indications given in this document into account ;
- Make sure that all the " hardware " and " software " parameters of operation of the product are fully mastered
  - are the power supplies correct?
  - is the addressing right?
- Reconsider the safety precautions one last time
- Analysis of application constraints:
  - what signals am I going to process?
  - where could any problems come from?
  - do the cables have to be shielded?
  - is my equipment at ground?
  - are the measurements going to be correct?
  - is galvanic isolation needed?
  - is the ventilation sufficient?
  - is my installation reliable? etc ...

### NOTE ABOUT BOARDS INSERTION

Some boards are fitted with a continuity joint for EMC protection (ex. VME). This joint is shipped separately in a bag with mounting instructions and limitations. Please read them before integrating the products.

## Chapter I

## Maintenance

Take the usual precautions for return of the faulty equipment:

- Make sure that the product is returned in its original packaging
- Enclose a note with the product describing the fault which has occurred as clearly as possible

Do not try to repair the product by yourself for:

if the equipment is under warranty ⇒ the warranty will become null and void

if the equipment is out of warranty ⇒ the product will be stipulated to be unrepairable

## Chapter J

# Environmental protection

**ADAS** is a company very worried about the environment. For that purpose, it applies as much as possible the directives on the environment.

### J.1. The ROHS directive (2002/95/CE)

During the study and the validation of its new products, ADAS will take into account the requirements of this directive.

It is the same for the evolutions of products already "on the market".

### J.2. End of life

When the product is at the end of life and must be thrown or destroyed, the end user will have to take arrangement of selective sorting in agreement with regulations in force.

The logo below affixed on our products notifies this user on the precautions to be taken.

